

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for managing connections in a network comprising:
 - receiving a request packet for establishing a protocol-based connection;
 - assigning the request packet to a selected one of a plurality of classes of request packets based upon a protocol of the requested connection;
 - forwarding the request packet if ~~the~~ a number of request packets forwarded from the selected class in a predetermined time interval has not reached a first maximum count; ~~and~~
 - dropping the request packet if the number of request packets forwarded from the selected class in the predetermined time interval has reached the first maximum count;
 - receiving an additional packet associated with the request packet prior to establishing the protocol-based connection;
 - assigning the additional packet to a pass-through class if the request packet is forwarded; and
 - forwarding the additional packet from the pass-through class even if the first maximum count has been reached.
2. (original) The method of claim 1 wherein the first maximum count is adjustable to effectuate different rates of packet forwarding for the selected class.
3. (original) The method of claim 1 wherein the predetermined time interval is adjustable to effectuate different rates of packet forwarding for the selected class.
4. (original) The method of claim 1 wherein a counter associated with the selected class is used to determine whether number of packets forwarded from the selected class in the predetermined time interval has reached the first maximum count.

5. (original) The method of claim 4 wherein the counter is a count-down counter.
6. (currently amended) The method of claim 1 wherein the request packet is forwarded only if a count of active connection requests for which connections have not been established has not reached a second maximum limit.
7. (previously presented) The method of claim 6 wherein the count of active connection requests is incremented when the request packet is forwarded from the selected class.
8. (previously presented) The method of claim 6 wherein the count of active connection requests is decremented when the protocol-based connection is established.
9. (previously presented) The method of claim 6 wherein the count of active connection requests is decremented when the protocol-based connection is terminated before being established.
10. (canceled)
11. (currently amended) The method of claim ~~10~~ 6 wherein the additional packet relates to status of the requested protocol-based connection.
12. (currently amended) The method of claim ~~10~~ 6 wherein the additional packet relates to termination of the requested protocol-based connection.
13. (original) The method of claim 1 wherein the protocol-based connection is based on a Point-to-Point Protocol (PPP).
14. (original) The method of claim 1 wherein the protocol-based connection is based on a Point-to-Point Protocol over Ethernet (PPPoE).
15. (original) The method of claim 1 wherein the protocol-based connection is based on a Layer Two Tunneling Protocol (L2TP).

16. (original) The method of claim 1 wherein the protocol-based connection is based on a Dynamic Host Configuration Protocol (DHCP).

17. (currently amended) An apparatus for managing connections in a network comprising:

a control plane ~~operable~~ operative to process requests for protocol-based connection; and

a data plane operative to

receive a request packet for establishing a protocol-based connection,

assign the request packet to a selected one of a plurality of classes of request packets based upon a protocol of the requested connection,

forward the request packet to the control plane if the number of request packets forwarded from the selected class in a predetermined time interval has not reached a first maximum count, and

drop the request packet if the number of request packets forwarded from the selected class in the predetermined time interval has reached the first maximum count,

receive an additional packet associated with the request packet prior to establishing the protocol-based connection,

assign the additional packet to a pass-through class if the request packet is forwarded; and

forward the additional packet from the pass-through class even if the first maximum count has been reached.

18. (original) The apparatus of claim 17 wherein the first maximum count is adjustable to effectuate different rates of packet forwarding for the selected class.

19. (original) The apparatus of claim 17 wherein the predetermined time interval is adjustable to effectuate different rates of packet forwarding for the selected class.

20. (original) The apparatus of claim 17 wherein a counter associated with the selected class is used to determine whether number of packets forwarded from the selected class in the predetermined time interval has reached the first maximum count.

21. (original) The apparatus of claim 20 wherein the counter is a count-down counter.

22. (currently amended) The apparatus of claim 17 wherein the request packet is forwarded only if a count of active connection requests for which connections have not been established has not reached a second maximum limit.

23. (previously presented) The apparatus of claim 22 wherein the count of active connection requests is incremented when the request packet is forwarded from the selected class.

24. (original) The apparatus of claim 22 wherein the count of active connection requests is decremented when the protocol-based connection is established.

25. (previously presented) The apparatus of claim 22 wherein the count of active connection requests is decremented when the protocol-based connection is terminated before being established.

26. (canceled)

27. (currently amended) The apparatus of claim ~~26~~ 22 wherein the additional packet relates to status of the requested protocol-based connection.

28. (currently amended) The apparatus of claim ~~26~~ 22 wherein the additional packet relates to termination of the requested protocol-based connection.

29. (original) The apparatus of claim 17 wherein the protocol-based connection is based on a Point-to-Point Protocol (PPP).

30. (original) The apparatus of claim 17 wherein the protocol-based connection is based on a Point-to-Point Protocol over Ethernet (PPPoE).

31. (original) The apparatus of claim 17 wherein the protocol-based connection is based on a Layer Two Tunneling Protocol (L2TP).

32. (original) The apparatus of claim 17 wherein the protocol-based connection is based on a Dynamic Host Configuration Protocol (DHCP).

33. (currently amended) A system for managing connections in a network comprising:

- means for receiving a request packet for establishing a protocol-based connection;
- means for assigning the request packet to a selected one of a plurality of classes of request packets based upon a protocol of the requested connection;
- means for forwarding the request packet if the number of request packets forwarded from the selected class in a predetermined time interval has not reached a first maximum count and a number of active connection requests for which connections have not been established has not reached a second maximum limit; and
- means for dropping the request packet if the number of request packets forwarded from the selected class in the predetermined time interval has reached the first maximum count
- means for receiving an additional packet associated with the request packet prior to establishing the protocol-based connection,
- means for assigning the additional packet to a pass-through class if the request packet is forwarded; and
- means for forwarding the additional packet from the pass-through class even if the first maximum count or the second maximum limit has been reached.